www.kscope.kr

K-scope

Head Light with camera

User's Manual

(Model:KS-07)

Saehanul Biotech Co., Ltd.

Components

- ⓐ Headlight main body 1
- ⓑ 1.7X Loupe 1
- ⓒ Loupe Holder 1
- ⓓ Rechargeable Battery 2
- ⓔ Battery Charging Holder 1
- ⓕ Charging Adapter 1
- ⓖ MicroSD Card (incl. Viewer Program) 1
- ⓗ MicroSD Card reader 1
- ⓘ Video Cable 1
- ⓙ USB Cable 1
- ⓚ Extension Video Cable (3M) (Option) 1
- ⓛ Video / Power Cable (Option) 1
- ⓜ Manual 1

Parts name

① Power LED & Optical lens
② Camera (adjust Focus)
③ Camera status LED
④ Camera On/Off switch
⑤ Voice recording Mic.
⑥ MicroSD Card slot
⑦ USB Cable slot
⑧ Pivot joint
⑨ Light On/Off switch
⑩ Forehead protection pad
⑪ Adjustable Headband buckle
⑫ Rechargeable battery case
⑬ Video output & power input terminal
⑭ 1.7X Loupe (with Holder)
⑮ Loupe holder hole
⑯ Angle adjust screw

How to Use

① Power LED and Optical lens
- There is no adjustable focus control. Do not open lens cover.
- Call us, A/S center when there is lamp problem.

② Camera (adjust Focus)
- Record the images
- Do not touch the camera lens. It needs to protect from any damages.
- Rotate the knob, surrounding the lens, to adjust the focus.
- In the factory, the focus was adjusted centrally and set 35cm distance.
- When seeing the camera in front of you, the focus can be adjusted by turing 25cm left and 50cm right

③ Camera status LED : Indicate Camera operating condition

④ Camera On/Off switch
- Push the switch for 2sec., the LED color to be changed from orange to green.
  And, with a buzzer sound, the LED color change to red again and recording starts.
- To stop recording, push the switch for 2sec. With LED flashing and buzzer sound, it is ended.

※ Check SD card before recording (alarming if no SD card)
※ If the camera does not normally ended (ex. forced battery removal),
a problem with a saved images may encountered

⑤ Voice recording Mic. : When recording an image, the voice is recorded together automatically.
※ You may delete a voice by the provided “Viewer program”.

⑥ Micro SD Card slot
- Able to use Micro SD Card(ⓖ) for recording.
- Micro SD card insertion and separation can cause errors in stored images, therefore need to check whether the camera switched off

※ Applicable for SDHC 2GB ~ 64GB memory card.

⑦ USB Cable slot
- To set up the time of recording images, by USB cable(ⓙ), you may connect with PC.
- The time can be initialized if not used the camera for 60days or longer.
  It is but, able to reset a time by the viewer program (see time setting page)

⑧ Pivot joint : Able to adjust a lamp up and down. It needs to fasten by the knob when in loose.

⑨ Light On/Off switch : Push the switch the light on, and off when push again.

⑩ Forehead protection pad : When changing, un-fasten left/right button and fasten.

⑪ Adjustable headband buckle
- When adjusting the length of headband, open the buckle, adjust a length, and close.

⑫ Rechargeable Battery case
- When changing battery, slide the cover to the arrow direction.
- Set a battery plus and minus correctly.
- Cover the case

⑬ Video output & power input terminal
- By the connection Video Cable(ⓘ) or Video/power cable(ⓛ), able to set Video output and DC input.
- Able to watch the video in real time by monitor or TV that composite terminal is available.
- When power connecting, use provided charging adapter(ⓕ).

⑭ 1.7X Loupe
- To install a Loupe(with holder), see the fig. below.

⑮ Loupe holder hole :
This is for loupe holder installed.

⑯ Angle adjust screw
- When recording, if the distance to the affected part closer than standard distance(35cm), viewing as an images, the illuminated spot may look biased towards the bottom.
- Rotate screw for adjusting light angle.

◎ Battery charger and adapter
- After connect charging adapter(ⓘ) to the 220V or 110V electrical outlet, then connect to the battery charging holder(ⓔ).
- Set battery plus and minus correctly.

◎ USB Cable (ⓙ)
- Able to set a time by connecting camera USB cable slot(⑦) and PC

◎ Extension video Cable(Option) (ⓚ)
- Enable to extend a cable length by connecting with provide standard video cable(ⓙ).

◎ Video/power Cable(Option) (ⓛ)
- Connect video and power cable with a battery case terminal(⑬).

How to use Camera

◎ Specification :
· Sensor : 1/4“ CMOS WXGA (1 megapixel) HD sensor
· Resolution and frame : 1280*720 / 30fps
· Video format : H.264
· Memory : MicroSD (SDHC 2GB~64GB)
· Video output : TV out (composite)
· Voice record : built in Mic.
· Record each 3 min.
※ The specifications may change without notice.

◎ Basic features
· Camera On
- Push the power switch for 2 sec. to activate the front green LED on.
- When the green LED changes to red, the record starts with ‘ding-dong’ sound.
- The record data is automatically stored in every 3 min. If the memory is not enough, the data continuously stored first-in/first-out.
※ It is recommended to store the data with separate memory device.

· Camera OFF
- The camera off(LED off) with ‘ding-dong’ sound when pushing a power switch 2 sec.
- When in abnormal power off, the last recorded data(during 3 min. data) might be damaged (ex. Sudden power off, battery problem, memory card pulled out during recording, etc.)

· Others
- No SD card : Green LED on and alarming.
- When insert SD card : Start recording (Red LED on), no alarm.

· At low voltage
- 1st step : Blinking red LED and alarming (every 3 sec.)
- 2nd step : After 2 minutes, in every 1 sec., alarming.
- 3rd step : After 1 minute, power off.
※ When in low voltage alarming, please quickly camera power off, and battery change or power connection, otherwise the 3 min. data might be damaged.

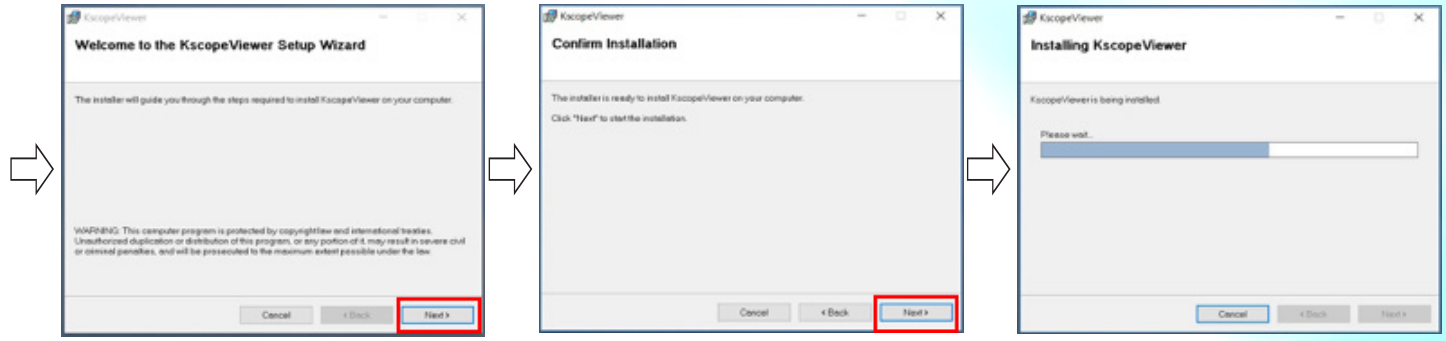
※ Recommend to use provided “K-scope viewer” when playing a stored images.
※ Recommend data back-up everyday, and format SD card in every month.
※ Provided SD card might be changed with another same graded card without notice.
※ After service of SD card is basically handled by the SD card maker.
※ It is not responsible for us if there is a poor recording status or being not recorded due to abnormality of SD card.

Guide of “K-scope Viewer” installation

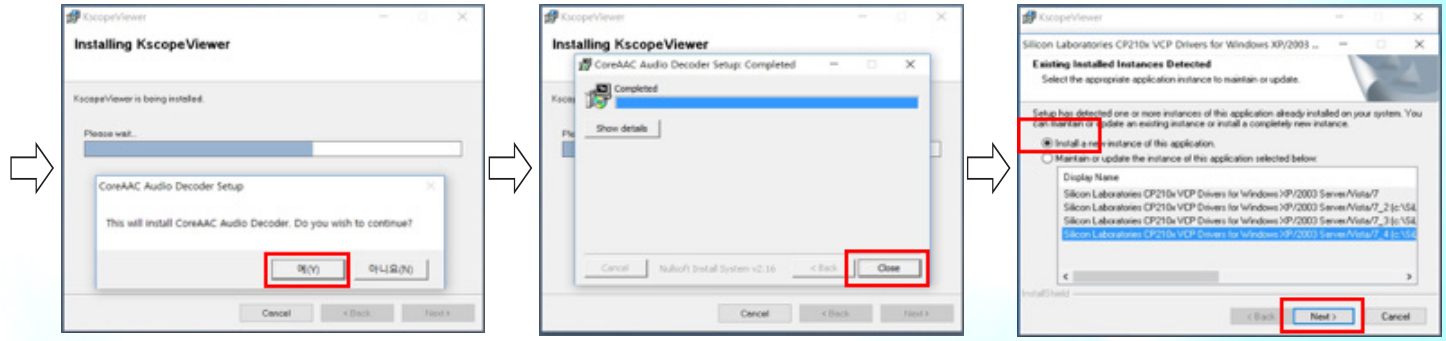
- It is a program that installs "K-scope Viewer", audio-codec and communication driver for time setting in an integrated way.

Run the "Kscope_setup" program in file manager

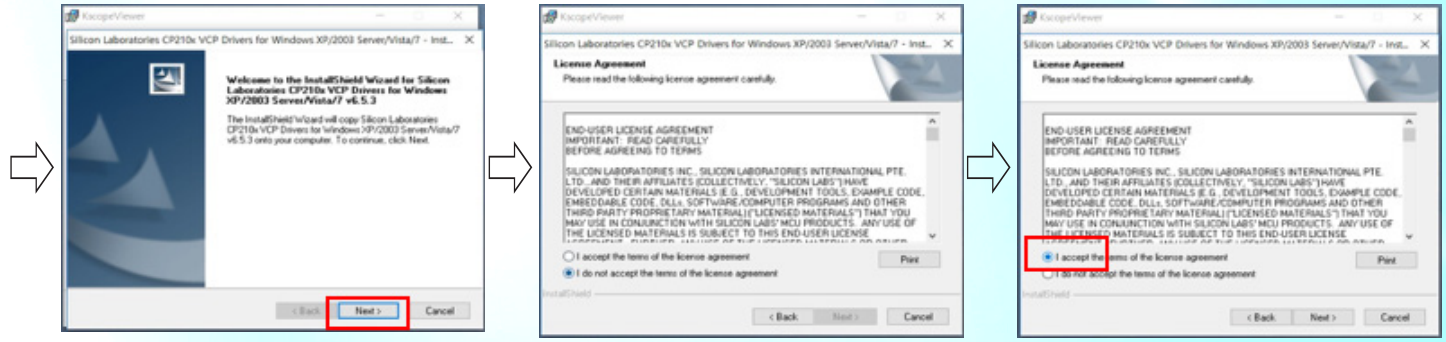
1 . Install viewer program

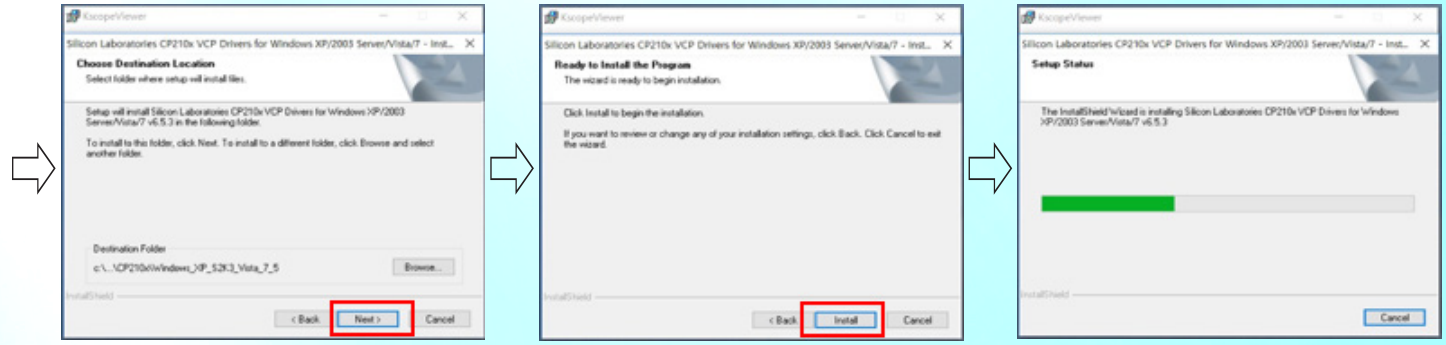


2 . Install audio driver

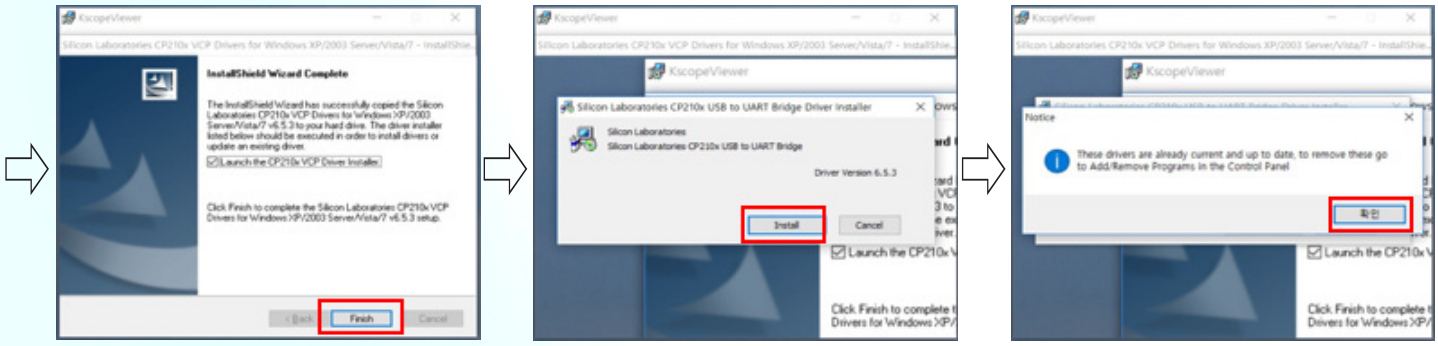


3 . Install CP210x VCP Driver

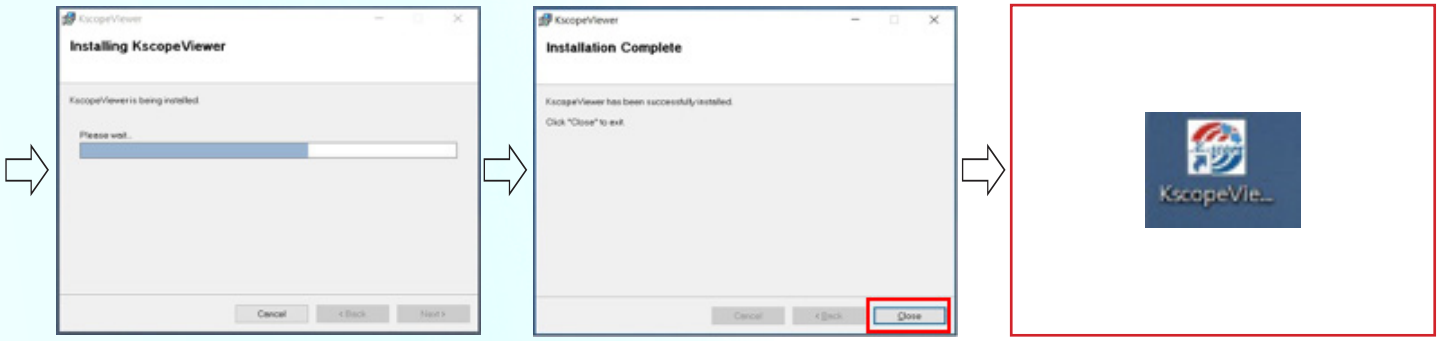




4 . Install CP210x USB to UART Driver

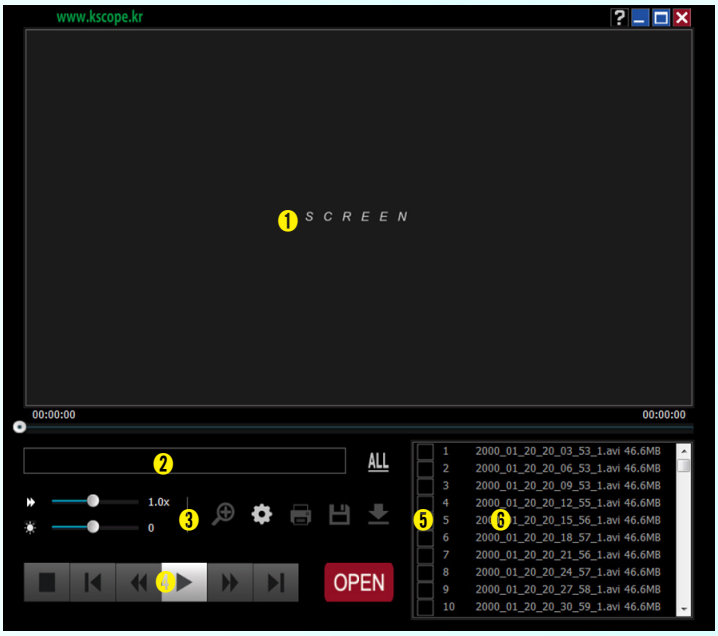


5 . Icon of viewer installation complete



Using the Viewer

1. Basic screen manu



❶ Video Display window ❷ Progress bar ❸ Function window
❹ Play button ❺ Back up check list ❻ File list window

2. Basic icon

Check version Minimization Maximization
Closing

3. Function icon

1. 1.0x Play speed : -0.2x ~ 2.0x
2. 0 Video brightness : -100 ~ 100
3. Zoom in and out
4. Print
5. Save the file : Capture video and save it as jpg file
6. Download : Save the selected image as a sound-removed image
7. ALL Select entire file
8. OPEN Open file

4. Play button

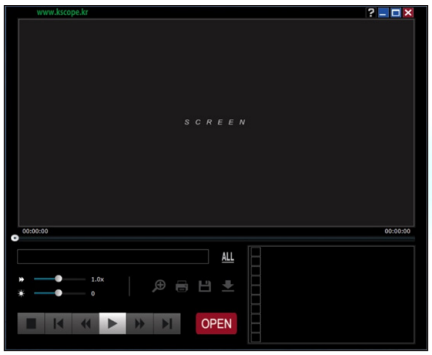
1) Stop
2) Previous
3) Previous search 1sec.
4) Play / Pause
5) Next search 1sec.
6) Next

Time setting

- After connecting the USB cable to the USB cable slot of headlight and PC, when you run the program, the time information is set automatically

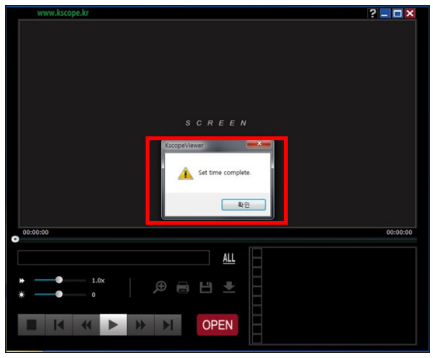
1. Run the " K-scope Viewer" program

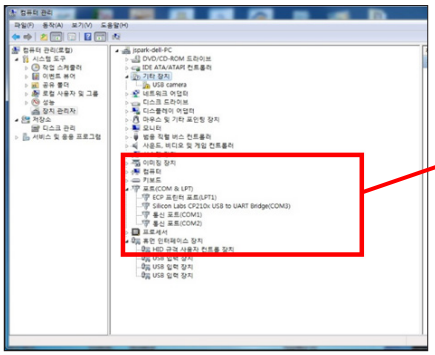
2. K-scope Viewer screen

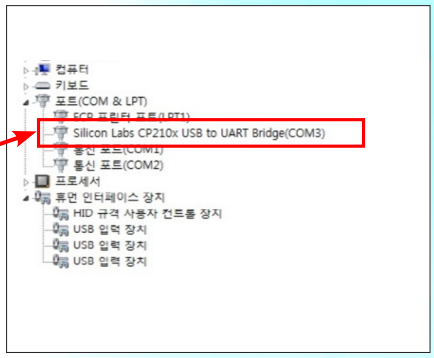


3. Connect the USB cable to the USB cable slot of headlight and PC

4. After turning on the headlight, after a while, when "set time complete" appear on viewer program screen, the time setting is complete.

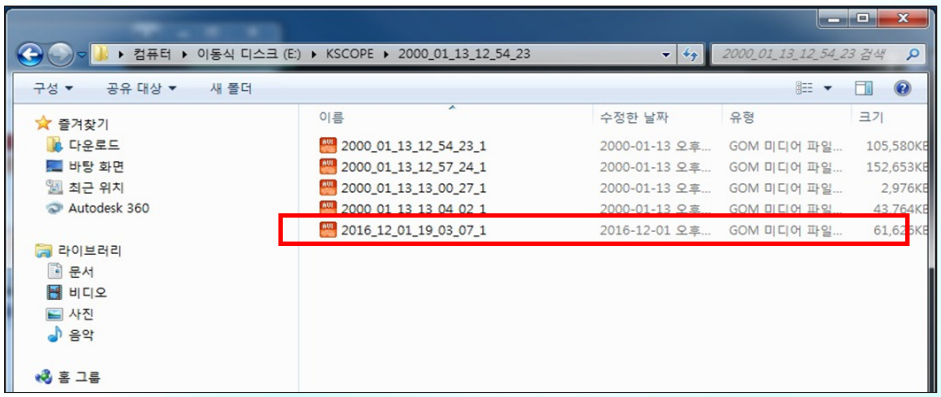






** If the "Set time complete" screen does not appear after connection.
- In device manager in control panel, verify that the port(COM & LPT) display Silicon Labs CP210x USB to UART Bridge(COMxx)
- If not, please install "K-scope viewer" again.

5. After that, it will be recorded at the changed time.



Caution

1. This product is a medical device. Do not use other than medical purpose.
2. This product has to be protected from the moisture damage.
3. This product has to be protected from the damage (ex. drop/shock) otherwise the camera/lens and/or LED might be troubled.
4. After use, this product needs to check power off otherwise it affects LED/ battery durability.
5. It is no good if the LED light to be lighted to the patient directly.
6. The charging battery is dangerous, such as heat, fire, and explosion.
7. This product should not be disassembled or modified.

Storage

1. It is advisable to avoid direct sunlight and do it in a dry spot.
2. Battery must be separated and stored if it is not used for longer time.
3. When in long periods of not using, because the internal operating battery may depleted, the internal clock shows wrongly.
   Incase, you need to see the time-setting page and set the time again.

Saehanul Biotech Co., Ltd.
Room No. 301, Sinwon Visiontower, 88, Jeonpa-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea
Tel: +82 31)478-8766 Fax: +82 31-478-8768
www.kscope.kr